ABSTRACT OF THE DISCLOSURE

There is provided a segment-based pixel processing apparatus and method for effective use of memory. The method includes dividing pixel data within a frame into a plurality of segments in the vertical direction; sequentially pre-processing or post-processing pixel data in a segment among the plurality of segments in line units, and then, sequentially pre-processing or post-processing pixel data in a next segment in line units; and repeating pre-processing or post-processing on pixel data in the other segments in line units until reaching a segment of a predetermined number.